10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TRIM28 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11866A

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q13263
Other Accession	NP_005753.1
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB09760
Calculated MW	88550
Antigen Region	178-207

Additional Information

Gene ID	10155
Other Names	Transcription intermediary factor 1-beta, TIF1-beta, E3 SUMO-protein ligase TRIM28, 632-, KRAB-associated protein 1, KAP-1, KRAB-interacting protein 1, KRIP-1, Nuclear corepressor KAP-1, RING finger protein 96, Tripartite motif-containing protein 28, TRIM28, KAP1, RNF96, TIF1B
Target/Specificity	This TRIM28 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 178-207 amino acids from the N-terminal region of human TRIM28.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TRIM28 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRIM28 (HGNC:16384)

Synonyms	KAP1, RNF96, TIF1B
Function	E3 SUMO and ubiquitin ligase that plays a pivotal role in embryonic development, genomic imprinting, and maintenance of genomic stability through repression of repetitive and retroviral elements. Also involved in DNA repair, regulation of innate immunity or cellular energy homeostasis. Acts as a scaffold for assembling transcriptional repression complexes containing methyltransferases, histone deacetylases, and chromatin remodelers. Serves as a nuclear corepressor for KRAB domain-containing zinc finger proteins (KRAB-ZFPs), mediating gene silencing by recruiting CHD3, a subunit of the nucleosome remodeling and deacetylation (NuRD) complex, and SETDB1, which methylates histone H3 at 'Lys-9' (H3K9me), leading to heterochromatin formation. In collaboration with SETDB1, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA- methylation independent-pathway (By similarity). Functions as a coactivator for CEBPB and NR3C1 (glucocorticoid receptor) in transcriptional activation of ORM1, and as a corepressor for ERBB4. Inhibits E2F1 activity by promoting E2F1-HDAC1 complex formation and preventing E2F1 acetylation. This contributes to CDKN1A/p21(CIP1) regulation and provides a partial backup to suppress E2F1-mediated apoptosis in the absence of RB1. Mediates the nuclear localization of several KRAB-ZFP transcription factors including KOX1, ZNF268, and ZNF300 among others. In association with isoform 2 of ZFP90, is required for the transcriptional repressor activity of FOXP3 and the suppressive function of regulatory T-cells (Treg) (PubMed:23543754). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). Acts as a corepressor for ZFP568. Beyond its nuclear functions, acts as a positive regulator of type I interferon (IFN-I) signaling by promoting Lys-63-linked ubiquitination of TBK1, facilitating TBK1-IRF3 complex formation (PubMed:38495890). Mediates TRAF6 SUMOylation to regulate its nucleo-cytoplasmic shuttling and modulate activation of the canonical NF-kappa-B signaling pathway (PubMed:39920527). Facilitates SUMOylation of NLRP3, protecting it from 'Lys-48'-linked ubiquitination and proteasomal degradation and thereby enhancing inflammasome activation (PubMed:34373456).
Cellular Location	Nucleus. Note=Associated with centromeric heterochromatin during cell differentiation through CBX1 (By similarity). Localizes to sites of DNA damage (PubMed:25593309) {ECO:0000250|UniProtKB:Q62318, ECO:0000269|PubMed:25593309}
Tissue Location	Expressed in all tissues tested including spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.

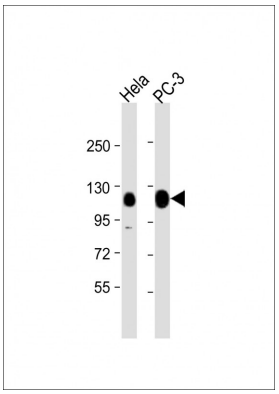
Background

The protein encoded by this gene mediates transcriptional control by interaction with the Kruppel-associated box repression domain found in many transcription factors. The protein localizes to the nucleus and is thought to associate with specific chromatin regions. The protein is a member of the tripartite motif family. This tripartite motif includes three zinc-binding domains, a RING, a B-box type 1 and a B-box type 2, and a coiled-coil region.

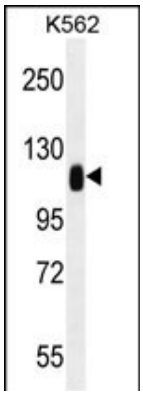
References

Lai, I.L., et al. J. Biol. Chem. 285(10):7187-7196(2010)
Yokoe, T., et al. Ann. Surg. Oncol. 17(3):821-828(2010)
Noon, A.T., et al. Nat. Cell Biol. 12(2):177-184(2010)
Li, X., et al. Sci Signal 3 (119), RA32 (2010) :
Groner, A.C., et al. PLoS Genet. 6 (3), E1000869 (2010) :

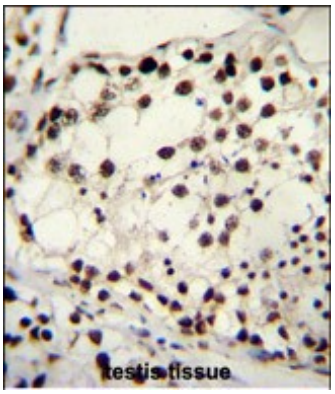
Images



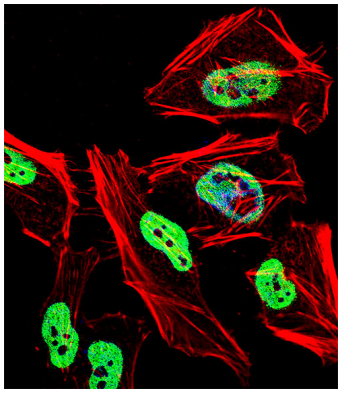
All lanes : Anti-TRIM28 Antibody (N-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: PC-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 89 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



TRIM28 Antibody (N-term) (Cat. #AP11866a) western blot analysis in K562 cell line lysates (35ug/lane).This demonstrates the TRIM28 antibody detected the TRIM28 protein (arrow).



TRIM28 Antibody (N-term) (Cat. #AP11866a)immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of TRIM28 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Fluorescent confocal image of Hela cell stained with TRIM28 Antibody (N-term)(Cat#RB09760).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with TRIM28 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). TRIM28 immunoreactivity is localized to Nucleus significantly.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.